

WE CLAIM :

1. An article with cooling capability by water desorption from a water-swollen gel, comprising a polymer absorbent enclosed within a bag delimited by a collapsible envelope having non-watertight walls, wherein said polymer absorbent is under the form of particles each of which comprises a core of less cross-linked polymer sequences more active in retaining absorbed water and a shell of more cross-linked polymer sequences apt to retard diffusion of water from a particle to another during desorption of absorbed water.

2. An article according to claim 1, wherein said polymer has a sodium polyacrylate base.

3. An article according to claim 1, wherein said envelope is made of a cotton woven textile fabric.

4. An article according to claim 1, wherein said envelope is made of a cotton-viscose woven textile fabric.

5. An article according to claim 1, wherein said envelope is made of a non-woven fabric of viscose and polyester fibers.

6. An article according to claim 1, wherein the amount of polymer particles enclosed in the bag is in excess compared to that which would be just required to fill up the bag when they are in the full swollen state.

7. An article according to claim 6, wherein said excess is from 5 to 10 percent by weight of the theoretical weight required to just fill the bag completely.

8. An article according to claim 1, wherein said envelope is made of a non-woven fabric comprising longer threads or fibers of natural or semi-synthetic nature and shorter polyester fibers, the respective proportions expressed as weight percentages being from 70 to 90 percent for the latter and from 10 to 30 percent for the former in the total weight of the composition.

9. An article according to claim 8, wherein said longer threads or fibers are made of a cellulosic material.

10. An article according to claim 8, wherein said longer threads or fibers are viscose fibers.

11. An article according to claim 8, wherein said shorter fibers are polypropylene fibers.

12. An article according to claim 1, wherein said envelope is made of a non-woven fabric comprising longer threads or fibers of viscose and shorter polypropylene fibers, the respective proportions expressed as weight percentages being from 70 to 90 percent for the latter and from 10 to 30 percent for the former in the total weight of the composition.

13. A method for relieving pain from a sore part of an individual's body with a cooling article according to claim 1, comprising wetting said polymer particles with water through said envelope during a sufficient time to swell them into a gel mass filling up said bag, and applying said article on said sore part of the body maintaining an inner wall in close contact thereon while allowing water vapour desorbed from said particles to escape through an opposed outer wall of said envelope.

14. An article with cooling capability by water desorption from a water-swollen gel, comprising a polymer absorbent enclosed within a bag delimited by a collapsible envelope having non-watertight walls and made of a non-woven fabric comprising longer threads or fibers of natural or semi-synthetic nature and shorter polyester fibers, wherein said polymer absorbent is under the form of particles each of which comprises a core of less cross-linked polymer sequences more active in retaining absorbed water and a shell of more cross-linked polymer sequences apt to retard diffusion of water from a particle to another during desorption of absorbed water, and wherein said polymer absorbent has a sodium polyacrylate base.

15. An article according to claim 14, wherein said longer threads or fibers are made of a cellulosic material.

16. An article according to claim 14, wherein said longer threads or fibers are viscose fibers.

17. An article according to claim 14, wherein said shorter fibers are polypropylene fibers.

18. An article according to claim 14, wherein said envelope is made of a non-woven fabric comprising longer threads or fibers of viscose and shorter polypropylene fibers, the respective proportions expressed as weight percentages being from 70 to 90 percent for the latter and from 10 to 30 percent for the former in the total weight of the composition.

19. An article according to claim 14, wherein the amount of polymer particles enclosed in the bag is in excess compared to that which would be just required to fill up the bag when they are in the full swollen state.

20. An article according to claim 19, wherein said excess is from 5 to 10 percent by weight of the theoretical weight required to just fill the bag completely.

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